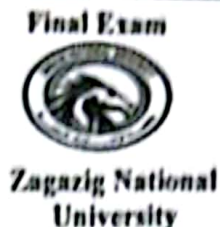


Program: Artificial Intelligent Program.
Level : 2nd Year
Course Code: IS200
Course Name: Database Systems
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No. of Questions: 1



Term No. : First-term
Date : 9/1/2025
Time : 2 hour
No. of Pages : 5 pages
Full Mark : 60
Model : 2

Student Name:

Student Code:

Please read the following questions carefully and answer all the following questions

Q1: Choose the correct answer (60 degrees)

(1) _____ is a constraint that can be defined only at the column level?

- a) UNIQUE **b) NOT NULL** c) CHECK d) PRIMARY KEY

(2) Which of the following is not a DDL command?

- a) UPDATE** b) TRUNCATE c) ALTER d) None of the Mentioned

(3) The database is an organized collection of -----related data.

- a) physically b) loosely **c) logically** d) badly

(4) A window into a portion of a database is

- a) Schema **b) View** c) Query d) Data dictionary

(5) What is an Instance of a Database?

- a) The logical design of the database system
b) The entire set of attributes of the Database put together in a single relation
c) The state of the database system at any given point of time
d) The initial values inserted into the Database immediately after its creation

(6) When converting one (1) to many (N) binary relationship into tables, the recommended solution is usually

- a) One big table with all attributes from both entities included
b) Foreign key added on the Child (many side) referencing the parent
c) Foreign key added on the Parent (one side) referencing the child
d) Foreign key added on both sides (both tables)

(7) An _____ is a set of entities of the same type that share the same properties, or attributes.

- a) Entity set** b) Attribute set c) Relation set d) Entity model

(8) Which of the following is true about specialization?

- a) It reduces redundancy in data storage **b) It is a top-down approach in database design**
c) It is used to create generalized entities d) It always violates the third normal form

(9) Which of the following is an example of generalization?

- a) Employee and Manager are combined into the entity Person** b) Vehicle is divided into Car and Motorcycle
c) Adding a new field to an existing table d) Creating a foreign key relationship between two tables

(10) A _____ constraint requires that an entity belong to no more than one lower-level entity set.

- a) Disjointness** b) Uniqueness c) Special d) Relational

(11) The relationship associating the weak entity sets with the identifying entity set is called as _____

- a) Identifying relationship** b) Connecting relationship c) Completing relationship d) Unique relationship

(12) Although all database professionals are concerned with performance, select the database professional that is most likely to be concern database performance:

- a) Application developer b) Website designer **c) Database administrator** d) Database designer

(13) Some part of the real world about which data is stored in a database is known as.....

- a. Data **b. Mini-world** c. Information d. Knowledge

1) relationship between the instances of a single entity type is called a _____ relationship
a) Tertiary b) binary c) unary d) n-ary

(15) Which one of the following is an advantage of database management system approach?
a) Reduced security and control of the data b) Increased duplication of data.
c) Programs are independent of the data format d) All

(16) An entity in A is associated with at most one entity in B. An entity in B, however, can be associated with any number (zero or more) of entities in A.

a) One-to-many b) One-to-one c) Many-to-many d) Many-to-one

(17) When discussing a data model under construction, users speak in terms of _____ schema they work with, which database developers must translate into _____ schema?

a) External, internal b) Internal, implementation c) Internal, conceptual d) External, conceptual

(18) Which of three schemas used in three-schema model shows physical storage using a particular product or technique?

a) Internal b) External c) Conceptual d) Implementation

(19) Which of the following is/are the property/properties of the relations?

a) the relation has a unique name. b) An atomic (single) value resides in each relation cell
c) There are distinct names for each attribute d) all of the above

(20) A program whose job is to store and retrieve user data in the database is called:

a) Database Management System b) Data Business Management Service
c) Database Modeling System d) Data Business Model System

(21) The process of making a normalized schema unnormalized is called as _____

(a) Unnormalization (b) Denormalization (c) Renormalization (d) Annormalization

(22) A printed or onscreen display of data or information in the database is called _____?

a) Entity b) Report c) Query d) Screen

(23) Entities can be associated with one another in which of the following _____?

a) Attribute b) Identify c) Entity d) Relationship

(24) A type of query that is placed within a WHERE or HAVING clause of another query is called

a) Master query b) query c) multi-query d) subquery

(25) The attribute on the left-hand side of the arrow in a functional dependency is _____?

a. Candidate key b. Determinant c. Foreign key d. Primary key

(26) In 2NF which forms of dependency is removed?

a. Functional b. Partial c. Associative d. Transitive

(27) A functional dependency between two or more non key attributes is called _____?

a). Partial functional dependency b). Partial non-key dependency c). Transitive dependency d). None

(28) In E-R model the details of the entities are hidden from the user. This process is called _____?

a). Generalization b). Abstraction c). Specialization d). None of these

(29) SQL allows the use of special operators in conjunction with the WHERE clause. A special operator used to check whether an attribute value is null is

(a) BETWEEN (b) IS NULL (c) LIKE (d) =null

(30) Let E be an entity set in a relationship set R. If only some entities in E participate in relationships in R, Then the participation of E in R is _____

a) Partial b) Total c) Complete d) Incomplete

(31) An entity in A is associated with at most one entity in B, and an entity in B is associated with at most one entity in A. This is called as

a) One-to-many b) One-to-one c) Many-to-many d) Many-to-one

32) A table can have only one _____

a) Secondary key b) Alternate key c) Unique key d) Primary key

(33) The entity relationship set is represented in E-R diagram as

- a) Double diamonds b) Undivided rectangles c) Dashed lines d) Diamond

(34) If you don't specify ASC or DESC after a SQL ORDER BY clause, the following is used by default

- a) ASC b) DESC c) There is no default value d) None of the mentioned

(35) Which of the following is a legal expression in SQL?

- a) SELECT NULL FROM EMPLOYEE; b) SELECT NAME FROM EMPLOYEE;

c) SELECT NAME FROM EMPLOYEE WHERE SALARY=NULL; d) None of the above

(36) The refers to the way data is organized in and accessible from DBMS.

- a) database hierarchy b) data organization c) data sharing d) data model

(37) In a relational model, relations are termed as

- a) Tuples b) Attributes c) Tables d) Rows

(38) Which relationship is used to represent a specialization entity?

- a) ISA b) AIS c) ONIS d) WHOIS

(39) The entity set person is classified as student and employee. This process is called

- a) Generalization b) Specialization c) Inheritance d) Constraint generalization

(40) If you were collecting and storing information about your music collection, an album would be considered a(n) ____

- a) Relation b) Entity c) Instance d) Attribute

(41) If an entity set is a lower-level entity set in more than one ISA relationship, then the entity set has----

- a) Hierarchy b) Multilevel inheritance c) Single inheritance d) Multiple inheritance

(42) Higher level entity sets are designated by the term _____

- a) Sub class b) Super class c) Parent class d) Root class

(43) With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" ends with an "a"?

- a) Select * from persons where FirstName like '%a'; b) Select * from persons where FirstName like '%a%';
c) Select * from persons where FirstName= 'a'; d) Select * from persons where FirstName like 'a%';

(44) Given the basic ER and relational models, which of the following is INCORRECT?

- a) An attribute of an entity can have more than one value
b) An attribute of an entity can be composite
c) In a row of a relational table, an attribute can have more than one value

d) In a row of a relational table, an attribute can have exactly one value or a NULL value

(45) How can you change "Hansen" into "Nilsen" in the "LastName" column in the Persons table?

- a) Edit persons set LastName = ' Nilsen' where LastName= 'Hansen';
b) Edit persons set LastName = ' Hansen' where LastName= 'Nilsen';
c) Update persons set LastName = ' Nilsen' where LastName= 'Hansen';
d) Update persons set LastName = ' Hansen' where LastName= 'Nilsen';

(46) With SQL, how can you delete the records where the "FirstName" is "Peter" in the Persons Table?

- a) Delete FirstName = 'Peter' from persons; b) Delete from persons FirstName = 'Peter';
c) Delete from persons where FirstName = 'Peter'; d) Delete Row FirstName = 'Peter' from persons;

(47) Which of the following statement can be considered as a part of data dictionary?

- a) Metadata b) The complete set of data records
c) Data flow diagram of the system d) An Entity-Relationship diagram of the schema

(48) Which command is used to change the definition of a table in SQL?

- a) CREATE b) UPDATE c) ALTER d) SELECT

(49) A printed or onscreen display of data or information in the database is called _____?

- a. Entity b. Report c. Query d. Screen

- 50)keyword is used to find the number of values in a column
 a) sum b) AVG **c) count** d) Max
- (51) What is the method of specifying a primary key in a schema description?
 a) By writing it in bold letters b) By underlining it using a dashed line
 c) By writing it in capital letters **d) By underlining it using a bold line**
- (52) Which of the following refers to an entity that logically depends on another entity?
 a) Strong entity b) ID-dependent entity **c) Weak entity** d) Dependent
- (53) Which of the following data models stores data in table structures and performs various operations on table rows and columns?
 a) Object **b). Relational** c). Hierarchical d). Network
- (54) Which is not a basic construct of an E-R model?
 a). Relationships b). Entity types **c). Identifiers** d) Attributes
- (55) What is a foreign key?
 a) A foreign key is a primary key of a relation which is an attribute in another relation
 b) A foreign key is a superkey of a relation which is an attribute in more than one other relations
c) A foreign key is an attribute of a relation that is a primary key of another relation
 d) A foreign key is the primary key of a relation that does not occur anywhere else in the schema
- (56) A subtype entity _____?
 a). Contains optional attributes not contained in super type **c). Is always mutually exclusive**
 b). Inherits attributes of its supertype **d). a and b**
- (57) Which attributes aren't considered in a table?
 a) Core b) Composite **c) Derived** d) None
- (58) The language used in application programs to request data from the DBMS is referred to as the
a) DML b) DDL c) DCL d) SDL
- (59) Related fields in a database are grouped to form a-----
 a) Data file **b) Data record** c) Menu d) Bank
- (60) A collection of interrelated data and a set of programs that allow users to access and modify data is known as--
 a) Data management system **b) Database system** c) Data -process system d) Data - program system
- (61) Which SQL statement is used to extract data from a database?
a) Select b) Update c) Insert d) delete
- (62) A table that displays data redundancies yields _____ anomalies.
 (a) Update (b) Insertion (c) Deletion **(d) All of the above**
- (63) _____ is NOT a type of constraint in SQL language?
 a) FOREIGN KEY b) PRIMARY KEY c) UNIQUE **d) ALTERNATE KEY**
- (64) Which of the following statement is correct to display all the cities with the condition, temperature, and humidity whose humidity is not in the range of 60 to 75 from the 'whether' table?
 a) SELECT * FROM weather WHERE humidity IN (60 to 75)
 b) SELECT * FROM weather WHERE humidity BETWEEN 60 AND 75
 c) SELECT * FROM weather WHERE humidity NOT IN (60 AND 75)
d) SELECT * FROM weather WHERE humidity NOT BETWEEN 60 AND 75
- (65) Choose the correct statement regarding superkeys
a) A superkey is an attribute or a group of multiple attributes that can uniquely identify a tuple
 b) A superkey is a tuple or a set of multiple tuples that can uniquely identify an attribute
 c) Every superkey is a candidate key
 d) A superkey is an attribute or a set of attributes that distinguish the relation from other relations

- (66) In 3NF a non-key attribute must not depend on a ____?
- a. Non key attribute b. Key attribute c. Composite key d. Sort key
- (67) What is the highest normal form a relation is in if every determinant is a candidate key?
- a. First b. Second c. Third d. BCNF
- (68) A functional dependency is a relationship between or among.....
- a. Tables b. Rows c. Columns d. Attributes
- (69) In ____ normal form, any multi-valued attributes have been removed.
- a. First b. Second c. Fourth d. Fifth
- (70) An attribute A of datatype varchar(15) has the value "Avi". The attribute B of datatype char(15) has value "Reed". Here attribute A has ____ spaces and attribute B has ____ spaces
- a) 15, 4 b) 15, 15 c) 3, 4 d) 3, 15
- (71) SELECT ROUND (65.726, -1) FROM DUAL;
- Prints:
- a. is illegal b. garbage c. 726 d. 70
- (72) ----- Responsible to define the content, the structure, the constraints, and functions or transactions against the database
- a) Database administrators b) Database Designers c) end user d) operator
- (73) What do double diamonds represent in an ER diagram?
- a) They link entity sets to relationship sets b) Total participation of an entity in a relationship set
- c) Relationship sets linked to weak entity sets d) None of the mentioned
- (74) The descriptive property possessed by each entity set is _____
- a) Entity b) Attribute c) Relation d) Model
- (75) The attribute name could be structured as an attribute consisting of first name, middle initial, and last name. This type of attribute is called _____
- a) Simple attribute b) Composite attribute c) Multivalued attribute d) Derived attribute
- (76) Which of the following can be a multivalued attribute?
- a) Phone_number b) Name c) Date_of_birth d) All of the mentioned
- (77) Which of the following gives a logical structure of the database graphically?
- a) Entity-relationship diagram b) Entity diagram c) Database diagram d) Architectural representation
- (78) The total participation by entities is represented in E-R diagram as _____
- a) Dashed line b) Double line c) Double rectangle d) Circle
- (79) In E-R diagram, generalization is represented by _____
- a) Ellipse b) Dashed ellipse c) Rectangle d) circle
- (80) A row of a relation is called a (n) _____?
- a) Attribute b) Entity c) Tuple d). Both a and c

With all best wishes
Dr. Asmaa Hanafe